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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,906	10/30/2003	Akihiko Takeda	Q78005	5662
23373	7590	06/27/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			HON, SOW FUN	
			ART UNIT	PAPER NUMBER
			1772	

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/695,906

Applicant(s)

TAKEDA ET AL.

Examiner

Sow-Fun Hon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 24-43 is/are pending in the application.  
4a) Of the above claim(s) 24-41 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 42 and 43 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Response to Amendment***

***Withdrawn Rejections***

1. The 35 U.S.C. 112, 2<sup>nd</sup> paragraph and 102(b) rejections of claim 42, are withdrawn due to Applicant's amendment dated 4/6/06.

***New Rejections***

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US 6,191,184) in view of Nishioka (US 6,653,769) and Sato (US 5,294,516).

Suzuki teaches a spacer (column 21, lines 45-50) formed from a resin composition for a spacer, the resin composition comprising: at least one resin selected from (1) a resin containing at least an allyl group (poly(allyl methacrylate, column 20, line 9), (2) a resin containing at least an allyl group and a hydroxyl group (poly(allyl methacrylate/methacrylic acid), column 20, line 9), and (3) a resin mixture containing an allyl-containing resin (poly(allyl methacrylate, column 20, line 9) and a hydroxyl-containing resin (poly(acrylic acid/hydroxyethyl methacrylate, column 20, lines 5-10); a polymerizable monomer (dipentaerythritol hexaacrylate, column 20, line 12); and a polymerization initiator (2-benxyl-2-dimethylamino-1-(morpholinophenyl)-butanone-1, column 20, lines 12-13 and column 15, lines 50-51), wherein the resin composition for a

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spacer is a photo-polymerizable resin composition (photo-setting, column 1, lines 60-64). Suzuki teaches that the resin composition further comprises an extender (filler such as glass and alumina, column 16, lines 47-48). Suzuki fails to disclose that the extender is present in an amount of 5% to 50% by mass of the total solid contents of the resin composition.

However, Nishioka teaches a spacer comprising an extender (ceramic filler, column 8, lines 40-42) present in an amount not larger than 30% by mass of the total solid contents of the spacer composition (column 9, lines 10-14), which overlaps the claimed range of 5 to 50%, for the purpose of adjusting the coefficient of thermal expansion of the spacer composition (column 9, lines 10-13).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have provided the extender of Suzuki in the amount within the range of 5 to 50% by mass of the total solid contents of the resin composition for the spacer of Suzuki, in order to provide the desired adjustment of the coefficient of thermal expansion of the spacer composition, as taught by Nishioka.

Suzuki fails to teach that the spacer is formed by a method comprising: applying the photosensitive resin layer to a receptor, wherein the photosensitive resin layer is part of a photosensitive transfer material, as defined by Applicant, comprising a temporary support, an alkali-soluble thermoplastic resin layer, an interlayer, and the photosensitive resin layer arranged in this order; peeling the temporary support off from the alkali-soluble thermoplastic resin layer; exposing the photosensitive resin layer to

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radiation, and removing unexposed portions in the photosensitive resin layer using an alkaline aqueous solution, and curing the exposed portions.

However, Suzuki teaches the steps of exposing the photosensitive resin layer to radiation (light, column 18, lines 39-41), removing the unexposed portions in the photosensitive resin (solubilize not the irradiated part, column 18, lines 65-67) using an alkaline solution (column 19, lines 1-3), and curing the exposed portions (subjecting to heat treatment at 200 °C for 20 minutes, column 19, lines 53-60). Furthermore, Suzuki teaches that method steps used to form a color filter can be used to form the spacer.

Sato teaches a method of forming a color filter (column 1, lines 9-16) comprising placing a photosensitive transfer material as defined by Applicant, onto a receptor so that a photosensitive layer of the photosensitive transfer material is attached to the receptor (adhering the photosensitive resin layer to a permanent substrate, column 2, lines 61-65), the photosensitive transfer material comprising a temporary support (substrate, column 2, lines 54-55), an alkali-soluble thermoplastic resin layer, an interlayer (intermediate layer, column 2, line 57), and the photosensitive resin layer in this order (column 2, lines 54-60); peeling the temporary support off from the alkali-soluble thermoplastic resin layer; exposing the photosensitive resin layer to radiation (light, column 2, lines 65-68) via the alkali-soluble thermoplastic resin layer and the interlayer (intermediate layer, column 3, lines 1-2); removing the alkali-soluble thermoplastic resin layer and the interlayer (column 3, lines 10-16); and removing unexposed portions in the photosensitive resin layer using an alkaline solution (developing, column 3, lines 16-18, alkaline developing solution, column 3, line 68,

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removal of the unhardened portion of the photosensitive resin layer with the developing solution, column 7, lines 1-5). Sato teaches that the method steps comprising the transfer material are for the purpose of providing an easy transfer operation of the imaged structure to the receptor (permanent substrate, column 3, lines 30-36).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used the method steps comprising the transfer material of Sato, as defined by Applicant, in the process of forming the spacer of Suzuki, in order to provide an easy transfer operation of the imaged structure to the receptor, and hence an improved construction of the spacer, as taught by Sato.

### ***Response to Arguments***

3. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*S. Hon*

Sow-Fun Hon

06/20/06

*Harold Pyon*

HAROLD PYON  
SUPERVISORY PATENT EXAMINER

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6/22/06